LineUp With Math™ Alignment
Delaware Mathematics Content Standards

Standard #1: Solve Problems

Students will develop their ability to SOLVE PROBLEMS by engaging in developmentally appropriate problem-solving opportunities in which there is a need to use various approaches to investigate and understand mathematical concepts; to formulate their own problems; to find solutions to problems from everyday situations; to develop and apply strategies to solve a wide variety of problems; and to integrate mathematical reasoning, communication and connections.

Performance Indicators	***LineUp With Math™* Activities**
1.03 formulate problems from everyday and mathematical situations;	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
1.04 develop and apply strategies to solve problems;	--Choose and apply a variety of strategies to optimize the solution of air traffic control conflicts.
1.05 interpret results with respect to the original problem;	--Identify and resolve distance, rate, time conflicts in air traffic control problems by varying plane speeds or changing plane routes.
1.06 generalize strategies and solutions to new problem situations.	--Explore and apply a variety of strategies to optimize the solution of air traffic control conflicts.

Standard #2: Communicate Mathematically

Students will develop their ability to COMMUNICATE MATHEMATICALLY by solving problems in which there is a need to obtain information from the real world through reading, listening and observing; to translate this information into mathematical language and symbols; to process this information mathematically; and to present results in written, oral and visual formats.

Performance Indicators	***LineUp With Math™* Activities**
2.01 model real-world situations using oral, written, concrete, pictorial, graphical and algebraic methods;	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
2.03 use mathematical notation and language to describe and discuss real-world situations;	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.

Standard #3: Reason Mathematically

Students will develop their ability to REASON MATHEMATICALLY by solving problems in which there is a need to investigate significant mathematical ideas in all content areas; to justify their thinking; to reinforce and extend their logical reasoning abilities; to reflect on and clarify their own thinking; to ask questions to extend their thinking; and to construct their own learning.

Performance Indicators	***LineUp With Math™* Activities**
3.02 draw and then justify conclusions;	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.
3.04 use properties, models, known facts, and relationships to explain and defend their thinking.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Standard #4: Mathematical Connections

Students will develop their ability to make MATHEMATICAL CONNECTIONS by solving problems in which there is a need to view mathematics as an integrated whole and to integrate mathematics with other disciplines, while allowing the flexibility to approach problems, from within and outside mathematics, in a variety of ways.

Performance Indicators	***LineUp With Math™* Activities**
4.02 integrate mathematical problem-solving with other curricular areas;	--Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
4.04 use various representations of the same concept;	--Use an interactive simulator plus calculation worksheets to model and resolve air traffic control conflicts.
4.06 determine the reasonableness of a mathematical solution as it applies in a real-world situation.	--Predict and resolve aircraft conflicts and explain results of mathematical calculations and simulations.

Standard #5: Estimation, Measurement and Computation

Students will develop an understanding of ESTIMATION, MEASUREMENT, and COMPUTATION by solving problems in which there is a need to measure to a required degree of accuracy by selecting appropriate tools and units; to develop computing strategies and select appropriate methods of calculation from among mental math, paper and pencil, calculators or computers; to use estimating skills to approximate an answer and to determine the reasonableness of results.

Performance Indicators	***LineUp With Math™* Activities**
5.62 apply ratios, proportions and percents to real life situations;	--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control. --Use percent relationships to resolve distance, rate, time conflicts in air traffic control.

Standard #7: Algebra

Students will develop an understanding of ALGEBRA by solving problems in which there is a need to progress from the concrete to the abstract using physical models, equations and graphs; to generalize number patterns; and to describe, represent and analyze relationships among variable quantities.

Performance Indicators	***LineUp With Math™* Activities**
7.64 solve proportions	--Use an interactive simulator plus calculation worksheets to apply proportional reasoning to identify and resolve distance, rate, time conflicts in air traffic control.

Standard #10: Patterns, Relationships and Functions

Students will develop an understanding of PATTERNS, RELATIONSHIPS AND FUNCTIONS by solving problems in which there is a need to recognize and extend a variety of patterns; and to analyze, represent, model and describe real-world functional relationships.

Performance Indicators	***LineUp With Math™* Activities**
10.61 analyze functional relationships to explain how a change in one quantity results in a change in another;	--Identify and resolve distance, rate, time conflicts in air traffic control problems by varying plane speeds or changing plane routes.